

RAW SEQUENCE LISTING

The Biotechnology Systems Branch of the Scientific and Technical
Information Center (STIC) no errors detected.

Application Serial Number: _____

Source: _____

Date Processed by STIC: _____

09/474, 435A

JPW O

07/29/2005

ENTERED

CRF Errors Edited by the STIC Systems Branch

Serial Number: 09/474,435A

CRF Edit Date: 08/03/2005
Edited by: DA

___ Realigned nucleic acid/amino acid numbers/text in cases where the sequence text "wrapped" to the next line

___ Corrected the SEQ ID NO. Sequence numbers edited were:

___ Inserted or corrected a nucleic number at the end of a nucleic line. SEQ ID NO's edited:

___ Deleted: ___ invalid beginning/end-of-file text ; ___ page numbers

___ Inserted mandatory headings/numeric identifiers, specifically:

___ Moved responses to same line as heading/numeric identifier, specifically:

✓ Other: Corrected Wrong numeric Identifier



IFWO

RAW SEQUENCE LISTING

DATE: 08/04/2005

PATENT APPLICATION: US/09/474,435A

TIME: 14:36:07

Input Set : N:\DA\09474435.raw

Output Set: N:\CRF4\08042005\I474435A.raw

1 <110> APPLICANT: Kovalic, David K.
2 Liu, Jingdong
4 <120> TITLE OF INVENTION: ARABIDOPSIS THALIANA GENOME SEQUENCE AND USES THEREOF
6 <130> FILE REFERENCE: 38-21(15473)B
8 <140> CURRENT APPLICATION NUMBER: US 09/474,435A
9 <141> CURRENT FILING DATE: 1999-12-28
11 <150> PRIOR APPLICATION NUMBER: US 60/089,524
12 <151> PRIOR FILING DATE: 1998-06-16
14 <150> PRIOR APPLICATION NUMBER: US 60/089,516
15 <151> PRIOR FILING DATE: 1998-06-16
17 <150> PRIOR APPLICATION NUMBER: US 60/089,808
18 <151> PRIOR FILING DATE: 1998-06-18
20 <150> PRIOR APPLICATION NUMBER: US 60/089,812
21 <151> PRIOR FILING DATE: 1998-06-18
23 <150> PRIOR APPLICATION NUMBER: US 60/089,807
24 <151> PRIOR FILING DATE: 1998-06-18
26 <150> PRIOR APPLICATION NUMBER: US 60/089,806
27 <151> PRIOR FILING DATE: 1998-06-18
29 <150> PRIOR APPLICATION NUMBER: US 60/089,811
30 <151> PRIOR FILING DATE: 1998-06-18
32 <150> PRIOR APPLICATION NUMBER: US 60/089,813
33 <151> PRIOR FILING DATE: 1998-06-18
35 <150> PRIOR APPLICATION NUMBER: US 09/333,534
36 <151> PRIOR FILING DATE: 1999-06-14
38 <150> PRIOR APPLICATION NUMBER: US 60/111,990
39 <151> PRIOR FILING DATE: 1998-12-14
41 <150> PRIOR APPLICATION NUMBER: US 60/111,991
42 <151> PRIOR FILING DATE: 1998-12-14
44 <150> PRIOR APPLICATION NUMBER: US 60/114,151
45 <151> PRIOR FILING DATE: 1998-12-29
47 <150> PRIOR APPLICATION NUMBER: US 60/155,422
48 <151> PRIOR FILING DATE: 1999-09-23
50 <150> PRIOR APPLICATION NUMBER: US 60/143,994
51 <151> PRIOR FILING DATE: 1999-07-15
53 <150> PRIOR APPLICATION NUMBER: US 60/139,932
54 <151> PRIOR FILING DATE: 1999-06-21
56 <150> PRIOR APPLICATION NUMBER: US 60/135,825
57 <151> PRIOR FILING DATE: 1999-05-24
59 <150> PRIOR APPLICATION NUMBER: US 60/120,644
60 <151> PRIOR FILING DATE: 1999-02-18
62 <150> PRIOR APPLICATION NUMBER: US 09/459,109
63 <151> PRIOR FILING DATE: 1999-12-13
65 <150> PRIOR APPLICATION NUMBER: US 09/459,110

CP9-6)

RAW SEQUENCE LISTING

DATE: 08/04/2005

PATENT APPLICATION: US/09/474,435A

TIME: 14:36:07

Input Set : N:\DA\09474435.raw

Output Set: N:\CRF4\08042005\I474435A.raw

66 <151> PRIOR FILING DATE: 1999-12-13

69 <160> NUMBER OF SEQ ID NOS: 195836

71 <210> SEQ ID NO: 1

72 <211> LENGTH: 576

73 <212> TYPE: DNA

74 <213> ORGANISM: Arabidopsis thaliana landsberg

76 <220> FEATURE:

77 <221> NAME/KEY: unsure

78 <222> LOCATION: (1)..(576)

79 <223> OTHER INFORMATION: unsure at all n locations

81 <400> SEQUENCE: 1

```

W--> 83 ttcaactcaga tattgaacgt tncattaacg agaaaatcat ttttgcattt acagngatag      60
85 ncgaacatgc tgggactagg gtaagatacn gngatgtcct tctgacctac ggatcttcca      120
87 ctgtcattga gatgataatta gtgcattgcac atgaactcgg gaaaaagttt cgtgtctttg      180
89 tgggtggattc tcgaccaaag cttcaaggga agctactgct tcgtagattg atcaaacgag      240
91 gcattaactg tacatacact catataactg ccatatcata tatcatgcac caagtcacca      300
93 aagtgtttttt gggcgccctca tcagttttttt ctaacggaac agtttactca agggttggca      360
95 ctgcttgtgt tgcaatggtg gctaattgctt tccgtgttcc tgtgcttgtt tgttgcaag      420
97 cctataagtt ccatgagaag gtgcagttgg attattcaat atgctccaat gagctcggtg      480
99 atccaaatgc tatttcaaaa gttcatggaa gagaagacat aaactactta aatggcctga      540
101 ccaacaatgc anagctgaag tttctgaact tgatgt      576
104 <210> SEQ ID NO: 2
105 <211> LENGTH: 661
106 <212> TYPE: DNA
107 <213> ORGANISM: Arabidopsis thaliana landsberg
109 <400> SEQUENCE: 2
111 aaatttagaa aaacggaaat cttggttact ggaagattac tggcaaacca aagcctatct      60
113 tgcgtaaccg ccaagagatc ggtgagaaaa aggttttgat gttttacatg agtaaggaa      120
115 ttggtggatc caaatccgac tgggttatgc acgagtacca tgctttctct cctactcagg      180
117 ttttttttcc ctctgttttt gctctttacc gtgatttgat tgctcgtttt cgtgtatcgg      240
119 gtgatgtgta tttgactgaa tgttttttac agatgatgat gacataataa atatgtaaag      300
121 ttatgtttta ggggtgacgtg agagagattt cttcttcttc tgcttcttct tatggtagtg      360
123 aaattgagca gagtcgtgac tctttaatcc ctcttcttgt gaacgattct gaggtttgtc      420
125 gatctcaaaa ctttctctgt ttctctttta aatccgataa ctgacttgtt ttgttggttg      480
127 gtgatgtgca ggaagaagct caaatcgagg atgctatacc aatagaggaa tgggaaacat      540
129 ggttgactga tgatggtgtt gatgagcagg tgaatcatat tatgaatatg aaagatgatc      600
131 gcaacaacca caggcctcaa aagccattga ctggtgtctt gattgacgat agtagtgatg      660
133 a      661
136 <210> SEQ ID NO: 3
137 <211> LENGTH: 492
138 <212> TYPE: DNA
139 <213> ORGANISM: Arabidopsis thaliana landsberg
141 <220> FEATURE:
142 <221> NAME/KEY: unsure
143 <222> LOCATION: (1)..(492)
144 <223> OTHER INFORMATION: unsure at all n locations
146 <400> SEQUENCE: 3
148 atccgaaatt tgatgaatat ttctctgctc ctaggcttgt tgtttatgca gtaccatatg      60
150 gatgtgttgt cccactcaag gttttgtaag tgtcgtaggt acttgaacta acttttcttt      120

```

RAW SEQUENCE LISTING

DATE: 08/04/2005

PATENT APPLICATION: US/09/474,435A

TIME: 14:36:07

Input Set : N:\DA\09474435.raw

Output Set: N:\CRF4\08042005\I474435A.raw

```

152 gcctgttgggt gtgtaagcag ggacggttca atggaaattht acatgcggaa agaattgaga 180
154 tattgaggat taaaccccat tggtaacaagc ttacgtttgg ttgtacttac ttatttacag 240
156 ctttcttata acaatcaaaa ctcttggcag ctactgaata tggagcactt cgatgatgtt 300
W--> 158 tggcaagatg gccaatgaag tgtctatgcc ccggatgctc gcgttntgac tacatattat 360
160 tgtggtatga ttntcctttt ttctggaatt catgagctaa ttgattctct tcttctctct 420
162 ttacttcat gttttcgtgg ctttatcttc ctggtgaaat gaactcttaa tngctaacc 480
164 gtaacttaca ag 492
167 <210> SEQ ID NO: 4
168 <211> LENGTH: 7290
169 <212> TYPE: DNA
170 <213> ORGANISM: Arabidopsis thaliana landsberg
172 <400> SEQUENCE: 4
174 gaagatgcta atggaccctt aaatcaattc cccatacatc aaagatctcc atttccaaga 60
176 ttgggttctg aggcatttca tttcttctgc taatgttgcc ctttctctgc ctgagcgtct 120
178 ttaaaccattg atggttacca aaaatctact tgcagaatct ttgacactgt cttgaatgtc 180
180 gcgaagtgga caccatatgc agagccgtgg caatgtagca ggataccttc tacttcatct 240
182 tctcagacgc atctcctgta aatcttatct ttacagagag tgtaaaggta aggctcatcc 300
184 cagtagtaat ggtgtatgtc cctgaaaaac ttcttctttt cataactggg caacttggga 360
186 gactctactt cgcagcccaa ataattgacg tgatcagcat accatggaga tcttccctca 420
188 atagcactca gttggtggaa ctctttccca ctgtagctcc caccgaagaa ttctacaacc 480
190 atgagttgct cttttggcat tgagtcgtcc atttgaatag gttcttcaat tctcatcctt 540
192 gccagatggt caactgcacc attttcaatg tccttcttgt ctactatct catgtcaaac 600
194 tctgcaaca gaagtatgca tctcaacagt cttggtttag tatccttctt ggcatacata 660
196 tgccctaaaag ttgcatggtc tttatagaca gtgaccttgg atccaaccaa atagcttctg 720
198 aacttctcaa atgcgaatac aacagctaga agttccttct cagttgttgc atattaatat 780
200 agctcaaat gccttaagct tactccctca aataagagat cgtcgttagc actttgataa 840
202 taggttttta gtcaattatc ctaaaacacc aatcatgtca ttgtagtatt ttaggttgtc 900
204 aatccaaatg ggtgtgatgc taacaatcaa gatgtgatca gaagtcacta agtcaagcca 960
206 agcataacag gttttggtgt gttccagcag tcctaagtga acatgcagaa aacagaaaaa 1020
208 caaacagaaa cagtaaaaaca ctcgaccaac acagctcttt gtagagctct gggtagagtc 1080
210 gagtgacagg tctgagtaaca gacaggaaat gaaacagggg tactcgactg cacagctctg 1140
212 tgccagacaa ctgggtggtc gagtatcagg tcgactaaca gtaaagattt gcagaaacta 1200
214 aacaacagat gacaggatgt agtaaacagt agtagagtaa acaataaaaat caattagata 1260
216 aagaattcct aaggatggga taattgagta gtttcgtttc ctgagtttac aggtgattga 1320
218 catgctcaat aaattaaccc tagacaacaa gttcattaac taaatctaag tgccaccgca 1380
220 acagagactc tcaagctaac ctagtcccag actcaatcac cattgacgag agctaacct 1440
222 acaagcatta cgaatcaaca agttaaagcc aaaacgctcc ctgcaaccaa taccttggta 1500
224 cagggtcaca aatctatgga attagtgggt cagacatttc atcgaatacc ttttgggcgc 1560
226 ggaaatgtct gggctcaaat tccagttgat cagaaagcaa taggcattaa gaacaactaa 1620
228 tccagaaggg atctatcaat caatactcaa tcacctagca tactgagaat tctacactac 1680
230 tctaaccat cctcaggaac ctattcacta ctacatactc ataatagaaa gcataaacgt 1740
232 tgaacagggt gaagacatga taacaacagt gtaacagtag tgtgataaca aaatgaacaa 1800
234 cagtaaacga aaatcaagaa ccaaaaactga atactgaata gataaagaga aatccggatt 1860
236 acaaaaagtc tagaacacaa ggtctgcgga aataaaaact ggtaaaaact tcttttttcg 1920
238 aaaatgagaa gtacatgcta cttatagcca aatatcccga aaccctaata ctcaaaacga 1980
240 cgaagtattt ggacgggtta agaactgtac tcgaccaggg tggtcgagtg agaggtcgag 2040
242 tgaatagctg gagtcttctt ttcttcttgg tctcgagtg tctggttgag tgcagaatga 2100
244 agaaggctct gaagcttggt atcgagtatg cagtcgagtg gtgtgatgga gatactcgac 2160
246 ctctaggtag agtgagtagg tctgagtggt gtctgatgat ggaggtgaag acactcgacc 2220

```

RAW SEQUENCE LISTING

DATE: 08/04/2005

PATENT APPLICATION: US/09/474,435A

TIME: 14:36:07

Input Set : N:\DA\09474435.raw

Output Set: N:\CRF4\08042005\I474435A.raw

```

248 tcatggtcga gtgaagtgat cgagtggcgg tctggtgatg gagacgaggg cactcggcct 2280
250 cggggtcgag tggtagggtg aagtgggtgat gtcctctact cgacctggcg gtcgagtgat 2340
252 ctcttgagat cttgaagctc ctactcgacc tctgggtcga gtgatttatc atgatcaggt 2400
254 ccgcttcttc cagatagctc gtcaacagct ccaaatacacc ttaaatacaac gcaaatatgc 2460
256 aacatgcatg caaaactatc ctaaacatgc aaagtgatga caaatgatgt gaaatggtat 2520
258 gaaacaatga tgatatgatg ctaaagtgat gacaaatgga tgctcaaaac atgcaaaata 2580
260 cactcttatc accaagtgat taccttcttt gcaaaactctt cctccactct cttgcgagca 2640
262 gagaaacatc atggttgctg caactagaac taggttcact aaccaattgg actgatacaa 2700
264 agaataccta cttcgatgaa tccgtgacag aggcaattcg tttgcaaat tcttcattca 2760
266 ctcaagctcc acccgaatcc cttagagcag cttggctccg tatcagatct tattagcgtg 2820
268 aatgtcccca acatggtttt caagagagcc aactcattaa tatattctac agaggggtag 2880
270 ccaagccata ccggactcaa cttgatgcag cgagctactg taacttcatg acaagaacta 2940
272 ctagtgaagc attactcctc attaccaatg ctttaactag tctttcgaca caggaagttg 3000
274 acacaaaaca aagaatttca gctgagaatg ccaccgcaag caaagagact cttgtttcag 3060
276 taatttctgc tcctatccaa gcccccctt ccaccttctt tagacagcag acttgattcc 3120
278 atgcttgccc agattttcgc gtgcccaca aagctcgagg ataagtttga tagcaaatat 3180
280 gattctctct atacagatct aaatagcacg attgacaatc tacgctctca tataacggaa 3240
282 ccctcaccta catcagcctc tatcaatgca gtcacattac gcaatggaaa gcaactgaat 3300
284 ccaatacttc agcgcgaacg ttcagctcag ccttcatctt taccagttgc agaaaaagac 3360
286 tcagttcgat tgacaccaat cactcttgac gactctgttt tgctttgtc gagtgaatc 3420
288 gacaatttcg tggaggagga ggaaattatt cccgatggtg tcgatcgaca ccagctcgt 3480
290 tcagacaatg tgcaaatca agctaaaacc aagtcagcaa atcggcaaat tctttcccc 3540
292 aagagtccta aaaaaacaag ataagcctta gatgatgtca gatgcaaggc tatgattgat 3600
294 aaggttatta ttgagatggc tctagttaga gctattcatc tctctcccac aataagaagg 3660
296 tatgtcaaga caatggtcac taagaattta acgaaagaat acagtgttat gatgttttca 3720
298 gagcatggaa gcgatatcat ttaggaacga attccaagaa agctacctga ccctggaacc 3780
300 tttgtactaa gtgtcaccat ccaaccacga ttccttccca agagccttat gtgatctcgg 3840
302 ttctagtgtg aatctgatgc ctggttcagt tgctaccttt atcactcttg tgttggtaga 3900
304 tcgttctacc cggattccag atggaattct tattgatgtt cccgggatga ttggaaagag 3960
306 catgattcct atagacttcg tagtcttgcc ttatgagaag gaacctaaag atccattaat 4020
308 ctttgggaga tccttcttgc acactgctgg agcaatcata gatgttcgac aaggcaggat 4080
310 agggctgaat gttggcaatc ttactatgca gttcaatatg aacacttttg tcaagaaacg 4140
312 gatcatagaa gggaaaacct tcttgataga tcttttact tcatcagctt cagatagtat 4200
314 ttcagagatg gaattagaag acccactaga gcgagttttg gtctcttcca tagtggatag 4260
316 tgcagatttg gacagtgaac cttctacata tactaagctg caagatgaga ccgaacatgt 4320
318 gatgcaactt acggttgaag aagctcttcc atctgtgatt ccaacaccga ctattaattc 4380
320 agattgggat ccagcaaagg ctctcaaat cgatttgaaa ccacttccag cagggttaag 4440
322 gtacgctttt cttggtgaaa attctactta tcatgttatt gtgaatgttt ctcttaatcc 4500
324 cgagagctc acctatttgc taagcaagct gcgcaatcat cgcaaagctc ttggctattc 4560
326 tcttgatgac attgcaggta tatctccaga tgtatgcatg cataggattc accttgagga 4620
328 tgagtctaag tcttcgttga acatcagaga aggcgtgaatc cgaatctgaa agaagtgggt 4680
330 aagaaaagaga ttatgaagct gttggaagca gggattatta atccgatttc agatagcagt 4740
332 tgggttagtc cagtttatgt agttcctaag aaaggagctg ttggaagcag ggattatcta 4800
334 ttcgatcttt gttatgctcc ttcaacattt cagagaggta tgatgtctat cttcacagac 4860
336 atgattgagg atatcatgga ggtcttcatg gatgattttt cagtttatgg atcatcgttt 4920
338 gaggattgct tagagaatct ctgcaaagta ttagcaagat gtgaggcaaa acatctgggt 4980
340 ttgaattggg agaaatgtca ctttatgatg taggatgaga tagttctcgg tcatagaatt 5040
342 tttgagcatg gtatagaagt cgatagagct aagatcgaag ttatgacaag tcttcgagcg 5100
344 cccgataatg ttaaagcaat gaggagtttc cttggacatg ctcgtttcta taggagattc 5160

```

RAW SEQUENCE LISTING

DATE: 08/04/2005

PATENT APPLICATION: US/09/474,435A

TIME: 14:36:07

Input Set : N:\DA\09474435.raw

Output Set: N:\CRF4\08042005\I474435A.raw

```

346 atcaaagggtt ttaggaaaaat tgcaagacca ttgaccgctt tactctgtaa agaagttaaa 5220
348 ttcgaattttt acataagagt gtcattgttg gacatgggca ttgccccttc aatgttagga 5280
350 ggcccaaaac agatatcaac aaagaagagg gccttttgcc attaaaaagg cccattaggt 5340
352 cgagaagggc aaaatcataa tttgcaaggg agacagaacg gaatttaggg ttcagattcc 5400
354 ctataaatag agagaaacac tattgggagc aagatccgat ccacaggtta ttagctgaga 5460
356 gacaaagaga atcgttgcct tgcccgaat cgttgcctag cccgacctcg ttgcctagcc 5520
358 cgacatcggt gcctcgccca tttctgtact ttgtctttct gcttttacga tgaagttctc 5580
360 ggctcggcag gatagtctat aaccggcgag acaaaactag tttgctgtaa tctctcgatc 5640
362 tttgttatcg ttaataaaat ggaccaactc cgttcagccc ccaaaatctc gtatattatt 5700
364 attattattg catccccaat acaaataatt gacgcccact gtggggccgt tgatcgaagc 5760
366 tatccttttt tgacgagcct atgcatcctg accctcacia gattcgcggt gatatgatag 5820
368 atacttccag cgatcgagaa actgatactg gcatacctca agcgcccgac gcgctgggct 5880
370 tacctccgct caaccagca gccatccgtg ccgagcatga tccctcgcg cgaatcttgt 5940
372 tcacaccaga cagaggagga gaaacagatc atgttcagggt cgcacgacct cctgccgcgc 6000
374 ctacccccct cgcagtagct ccagccgacg aagcgaccgc agctgcagca gcagcagcaa 6060
376 aaggcgccgc tcaaagacgt accacaacag cagaacgagg caccatttta gacgacctcg 6120
378 ttcaaaaccat tcttgatcga ctcgacggac aggaagcacg aactaccgaa cggattgacg 6180
380 cctttgtggc agcacaagtc acttcccaga gtcagatcga gcggcttcga cgccgaaaac 6240
382 acacctccca acctcatgac aatcacgatg gacagcagtc tccgcgaact ccagtcaccg 6300
384 agcgctcaga gacctatcgc cgtagaccag cgtcagttat cgtaggattc atcgacgagc 6360
386 attctcgcg tagccacaa gatgaccaca acctacagaa cgaccacaat atcgacgagc 6420
388 gcccacact gccgagcggc cacaacctgc agaacaaaca caaccagcag agcggccaca 6480
390 acgtgaaaaa cggccacaac cagcagaatg gccacaacaa gcagagcggc tccaacctgc 6540
392 ggaacgtgca caacatgttg cctaacacca actatccgca gagtaatcat aatctgaacg 6600
394 accacgatct cgcgagagggt caaaatctgc caagcgacca gtattttccg aataacccaaa 6660
396 ctctcgagtg caggcggatc ttttcggatc gacctatcga agttgaaaaa cgatcccgcg 6720
398 atctggaact tgcacggttg aacgcggtta caagagatat gtcttccaaa atgaattggg 6780
400 ccaccaccgc ggcccccgaa ctagagaggg tggttggaaga aacacaacgc tcgcccttca 6840
402 cggcgcgctc ctcggcagta cgcgtttgtc atgttaataa agtcaagcta ataccatata 6900
404 acggtcttca cgaccccaag atcttcccta aatcaatgtg cattgccatc aatgggtgcac 6960
406 attttttctg ctaaagaaag tgatgctaga agttgccaaa tgttcttgga aaacctgact 7020
408 gcagacgcac tcaactgggt ctgcggaatc ggagccaatt caatcgatag ctaccgaaaa 7080
410 cttacatctt tattcctgca gcaccactcg gttttcatga ttaaggaggc cacaaacgcc 7140
412 gacttgtgga ccatgtctca gaaggaaaag gaaccactta gaactgtcat tgaaagattc 7200
414 aagaaggttg tctcgaatat agccataact gatgatgcgg ctatcggggc tctacgaaac 7260
416 gcgttaagtt tcggatcacg gtttagagaa 7290
419 <210> SEQ ID NO: 5
420 <211> LENGTH: 1864
421 <212> TYPE: DNA
422 <213> ORGANISM: Arabidopsis thaliana landsberg
424 <220> FEATURE:
425 <221> NAME/KEY: unsure
426 <222> LOCATION: (1)..(1864)
427 <223> OTHER INFORMATION: unsure at all n locations
429 <400> SEQUENCE: 5
431 ttttagagtga gttttgtgtt aaagatatatt atttacctga cattatgaca atttctaata 60
433 accacataaa tagttacaca aaagaattta gagttaggtt tgtgttaaag atacgacata 120
435 actttttctt aatgacatta cagggaatgg cattactgac actatcagta tcgctaccgg 180
437 gacttaaac accgaaatgt tcgacggcta atgttgaaaa ctgtgaaaaa gcttcgggta 240

```

RAW SEQUENCE LISTING ERROR SUMMARY DATE: 08/04/2005
PATENT APPLICATION: US/09/474,435A TIME: 14:36:08

Input Set : N:\DA\09474435.raw
Output Set: N:\CRF4\08042005\I474435A.raw

Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:1; N Pos. 22,55,61,90,92,552
Seq#:3; N Pos. 346,373,472
Seq#:5; N Pos. 1588,1589,1590,1591,1592,1593,1594,1595,1596,1597,1598,1599
Seq#:5; N Pos. 1600,1601,1602,1603,1604,1605,1606
Seq#:7; N Pos. 5244,5245,5246,5247,5248,5249,5250,5251,5252,5253,5254,5255
Seq#:7; N Pos. 5256,5257,5258,5259,5260,5261,5262,5263,5264,5265,5266,5267
Seq#:7; N Pos. 5268,5269
Seq#:9; N Pos. 4004
Seq#:14; N Pos. 876,877,878,879,880,881,882,883,884,885,886,887,888,889,890
Seq#:14; N Pos. 891,892,893,894
Seq#:16; N Pos. 972
Seq#:25; N Pos. 182,183,184,185,186,187,188,189,190,191,192,193,194,195,196
Seq#:25; N Pos. 197,198,199,200,201,202,203
Seq#:27; N Pos. 897
Seq#:32; N Pos. 451,504
Seq#:46; N Pos. 2549,2550,2551,2552,2553,2554,2555,2556,2557,2558,2559,2560
Seq#:46; N Pos. 2561,2562,2563,2564,2565
Seq#:50; N Pos. 5465
Seq#:55; N Pos. 246,247,248,249,250,251,252,253,254,255,256,257,258,259,260
Seq#:55; N Pos. 261,262,263,264,265,266,267,268,269,270,271,272,273,274,275
Seq#:55; N Pos. 276,277,278,279,280,281,282,283,284,285,286,287,288,289,290
Seq#:55; N Pos. 291,292,293,294,295,296,297,298
Seq#:63; N Pos. 51,52,53,54,55,56,57,58,59,60,61,62,63,64,65,66,67,68,69,70
Seq#:63; N Pos. 408
Seq#:66; N Pos. 1131
Seq#:71; N Pos. 429,478
Seq#:75; N Pos. 1222,1237
Seq#:81; N Pos. 782,783,784,785,786,787,788,789,790,791,792,793,794,795,796
Seq#:81; N Pos. 797,798
Seq#:85; N Pos. 56,57,58,59,60,61,62,63,64,65,66,67,68,69,70,71,72
Seq#:92; N Pos. 4696,4697,4698,4699,4700,4701,4702,4703,4704,4705,4706,4707
Seq#:92; N Pos. 4708,4709,4710,4711,4712,4713
Seq#:93; N Pos. 1416
Seq#:95; N Pos. 2717,2718,2719,2720,2721,2722,2723,2724,2725,2726,2727,2728
Seq#:95; N Pos. 2729,2730,2731,2732,2733,2734,2735,2736,2737,2738,2739,2740
Seq#:95; N Pos. 2741,2742,2743,2744,2745,2746,2747,2748,2749,2750,2751,2777
Seq#:95; N Pos. 2778,2779,2780,2781,2782,2783,2784,2785,2786,2787,2788,2789
Seq#:95; N Pos. 2790,2791,2792,2793,2794,2795,2796,2797,2798,2799
Seq#:101; N Pos. 3415,3416,3417,3418,3419,3420,3421,3422,3423,3424,3425
Seq#:101; N Pos. 3426,3427,3428,3429,3430,3431,3432,3433,3434,3435,3436
Seq#:101; N Pos. 3437,3438,3439,3440,3441,3442,3443,3444,3445,3446,3447
Seq#:102; N Pos. 442,443,444,445,446,447,448,449,450,451,452,453,454,455
Seq#:102; N Pos. 456,457,458,459,460,461,462,463,464,465,466,467,468,469
Seq#:102; N Pos. 594,624,630,632,633,635,641,642

RAW SEQUENCE LISTING ERROR SUMMARY DATE: 08/04/2005
PATENT APPLICATION: US/09/474,435A TIME: 14:36:08

Input Set : N:\DA\09474435.raw
Output Set: N:\CRF4\08042005\I474435A.raw

Seq#:103; N Pos. 4855
Seq#:106; N Pos. 6626,6627,6628,6629,6630,6631,6632,6633,6634,6635,6636
Seq#:106; N Pos. 6637,6638,6639,6640,6641,6642,6643,6644,6645,6646,6653
Seq#:106; N Pos. 6654,6655,6656,6657,6658,6659,6660,6661,6662,6663,6664
Seq#:106; N Pos. 6665,6666,6667,6668,6669,6670,6671,6672,6673,6674,6675
Seq#:106; N Pos. 6676,6677,6678
Seq#:109; N Pos. 193,194,195,196,197,198,199,200,201,202,203,204,205,206

VERIFICATION SUMMARY

DATE: 08/04/2005

PATENT APPLICATION: US/09/474,435A

TIME: 14:36:08

Input Set : N:\DA\09474435.raw

Output Set: N:\CRF4\08042005\I474435A.raw

L:83 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1 after pos.:0
M:341 Repeated in SeqNo=1
L:158 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3 after pos.:300
M:341 Repeated in SeqNo=3
L:483 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:5 after pos.:1560
L:802 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:7 after pos.:5220
L:1235 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:9 after pos.:3960
L:1602 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:14 after pos.:840
L:1719 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:16 after pos.:960
L:2384 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:25 after pos.:180
L:2499 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:27 after pos.:840
L:2844 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:32 after pos.:420
M:341 Repeated in SeqNo=32
L:3611 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:46 after pos.:2520
L:3986 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:50 after pos.:5460
L:4267 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:55 after pos.:240
L:5290 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:63 after pos.:0
M:341 Repeated in SeqNo=63
L:5463 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:66 after pos.:1080
L:5708 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:71 after pos.:420
L:6249 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:75 after pos.:1200
L:6940 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:81 after pos.:780
L:7081 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:85 after pos.:0
M:341 Repeated in SeqNo=85
L:7760 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:92 after pos.:4680
L:7851 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:93 after pos.:1380
L:8284 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:95 after pos.:2700
M:341 Repeated in SeqNo=95
L:8985 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:101 after pos.:3360
M:341 Repeated in SeqNo=101
L:9020 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:102 after pos.:420
M:341 Repeated in SeqNo=102
L:9201 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:103 after pos.:4800
L:9622 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:106 after pos.:6600
M:341 Repeated in SeqNo=106
L:9735 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:109 after pos.:180
M:341 Repeated in SeqNo=109
L:10526 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:117 after pos.:10080
L:11587 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:125 after pos.:5220
M:341 Repeated in SeqNo=125
L:11916 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:127 after pos.:3900
M:341 Repeated in SeqNo=127
L:12293 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:128 after pos.:7620
M:341 Repeated in SeqNo=128
L:13406 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:133 after pos.:4620
M:341 Repeated in SeqNo=133
L:15137 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:155 after pos.:1920
M:341 Repeated in SeqNo=155

VERIFICATION SUMMARY

DATE: 08/04/2005

PATENT APPLICATION: US/09/474,435A

TIME: 14:36:08

Input Set : N:\DA\09474435.raw

Output Set: N:\CRF4\08042005\I474435A.raw

L:15238 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:156 after pos.:480

M:341 Repeated in SeqNo=156

Raw Sequence Listing before editing,
for reference only



IFWO

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/474,435A

DATE: 07/29/2005

TIME: 11:32:18

Input Set : E:\pa_00262.rpt

Output Set: N:\CRF4\07292005\I474435A.raw

1 <110> APPLICANT: Kovalic, David K.
2 Liu, Jingdong
4 <120> TITLE OF INVENTION: ARABIDOPSIS THALIANA GENOME SEQUENCE AND USES THEREOF
6 <130> FILE REFERENCE: 38-21(15473)B
8 <140> CURRENT APPLICATION NUMBER: US 09/474,435A
9 <141> CURRENT FILING DATE: 1999-12-28
11 <150> PRIOR APPLICATION NUMBER: US 60/089,524
12 <151> PRIOR FILING DATE: 1998-06-16
14 <150> PRIOR APPLICATION NUMBER: US 60/089,516
15 <151> PRIOR FILING DATE: 1998-06-16
17 <150> PRIOR APPLICATION NUMBER: US 60/089,808
18 <151> PRIOR FILING DATE: 1998-06-18
20 <150> PRIOR APPLICATION NUMBER: US 60/089,812
21 <151> PRIOR FILING DATE: 1998-06-18
23 <150> PRIOR APPLICATION NUMBER: US 60/089,807
24 <151> PRIOR FILING DATE: 1998-06-18
26 <150> PRIOR APPLICATION NUMBER: US 60/089,806
27 <151> PRIOR FILING DATE: 1998-06-18
29 <150> PRIOR APPLICATION NUMBER: US 60/089,811
30 <151> PRIOR FILING DATE: 1998-06-18
32 <150> PRIOR APPLICATION NUMBER: US 60/089,813
33 <151> PRIOR FILING DATE: 1998-06-18
35 <150> PRIOR APPLICATION NUMBER: US 09/333,534
36 <151> PRIOR FILING DATE: 1999-06-14
38 <150> PRIOR APPLICATION NUMBER: US 60/111,990
39 <151> PRIOR FILING DATE: 1998-12-14
41 <150> PRIOR APPLICATION NUMBER: US 60/111,991
42 <151> PRIOR FILING DATE: 1998-12-14
44 <150> PRIOR APPLICATION NUMBER: US 60/114,151
45 <151> PRIOR FILING DATE: 1998-12-29
47 <150> PRIOR APPLICATION NUMBER: US 60/155,422
48 <151> PRIOR FILING DATE: 1999-09-23
50 <150> PRIOR APPLICATION NUMBER: US 60/143,994
51 <151> PRIOR FILING DATE: 1999-07-15
53 <150> PRIOR APPLICATION NUMBER: US 60/139,932
54 <151> PRIOR FILING DATE: 1999-06-21
56 <150> PRIOR APPLICATION NUMBER: US 60/135,825
57 <151> PRIOR FILING DATE: 1999-05-24
59 <150> PRIOR APPLICATION NUMBER: US 60/120,644
60 <151> PRIOR FILING DATE: 1999-02-18
62 <150> PRIOR APPLICATION NUMBER: US 09/459,109
W--> 63 <150> PRIOR APPLICATION NUMBER: 1999-12-13
W--> 65 <150> PRIOR APPLICATION NUMBER: US 09/459,110

(pg-6)
Does Not Comply
Corrected Diskette Needed
(pg-1)

RAW SEQUENCE LISTING

DATE: 07/29/2005

PATENT APPLICATION: US/09/474,435A

TIME: 11:32:18

Input Set : E:\pa_00262.rpt

Output Set: N:\CRF4\07292005\I474435A.raw

```

66 <151> PRIOR FILING DATE: 1999-12-13
69 <160> NUMBER OF SEQ ID NOS: 195836
71 <210> SEQ ID NO: 1
72 <211> LENGTH: 576
73 <212> TYPE: DNA
74 <213> ORGANISM: Arabidopsis thaliana landsberg
76 <220> FEATURE:
77 <221> NAME/KEY: unsure
78 <222> LOCATION: (1)..(576)
79 <223> OTHER INFORMATION: unsure at all n locations
81 <400> SEQUENCE: 1
W--> 83 ttcaactcaga tattgaacgt tncattaacg agaaaatcat ttttgcattt acagngatag 60
85 ncgaacatgc tgggactagg gtaagatacn gngatgtcct tctgacctac ggatcttcca 120
87 ctgtcattga gatgatatta gtgcatgcac atgaactcgg gaaaaagttt cgtgtctttg 180
89 tgggtggattc tcgaccaaag cttcaaggga agctactgct tcgtagattg atcaaacgag 240
91 gcattaactg tacatacact catataactg ccatatcata tatcatgcac caagtcacca 300
93 aagtgttttt gggcgccctca tcagtttttt ctaacggaac agtttactca agggttggca 360
95 ctgcttgtgt tgcaatgggt gctaattgctt tccgtgttcc tgtgcttgtt tgttgcaag 420
97 cctataagtt ccatgagaag gtgcagttgg attattcaat atgctccaat gagctcgggtg 480
99 atccaaatgc tatttcaaaa gttcatggaa gagaagacat aaactactta aatggcttga 540
101 ccaacaatgc anagctgaag tttctgaact tgatgt 576
104 <210> SEQ ID NO: 2
105 <211> LENGTH: 661
106 <212> TYPE: DNA
107 <213> ORGANISM: Arabidopsis thaliana landsberg
109 <400> SEQUENCE: 2
111 aaatttagaa aaacggaaat cttggttact ggaagattac tggcaaacca aagcctatct 60
113 tgcgtaaccg ccaagagatc ggtgagaaaa aggttttgat gttttacatg agtaagggaac 120
115 ttgggtggatc caaatccgac tgggttatgc acgagtacca tgctttctct cctactcagg 180
117 ttttttttcc ctctgttttt gctctttacc gtgattgat tgctcgtttt cgtgtatcgg 240
119 gtgatttgta tttgactgaa tgttttttac agatgatgat gacatatata atatgtaaag 300
121 ttatgttttaa ggggtgacgtg agagagattt cttcttcttc tgcttcttct tatggtagtg 360
123 aaattgagca gagtcgtgac tctttaatcc ctcttcttgt gaacgattct gaggtttgtc 420
125 gatctcaaaa ctttctctgt ttctctttta aatccgataa ctgacttggt ttggttggtg 480
127 gtgatgtgca ggaagaagct caaatcgagg atgctatacc aatagaggaa tgggaaacat 540
129 ggttgactga tgatggtggt gatgagcagg tgaatcatat tatgaatatg aaagatgatc 600
131 gcaacaacca caggcctcaa aagccattga ctggtgtctt gattgacgat agtagtgatg 660
133 a 661
136 <210> SEQ ID NO: 3
137 <211> LENGTH: 492
138 <212> TYPE: DNA
139 <213> ORGANISM: Arabidopsis thaliana landsberg
141 <220> FEATURE:
142 <221> NAME/KEY: unsure
143 <222> LOCATION: (1)..(492)
144 <223> OTHER INFORMATION: unsure at all n locations
146 <400> SEQUENCE: 3
148 atccgaaatt tgatgaatat ttctctgctc ctaggcttgt tgtttatgca gtaccatatg 60
150 gatgtgttgt cccactcaag gttttgtaag tgtcgtaggt acttgaacta acttttcttt 120

```

RAW SEQUENCE LISTING

DATE: 07/29/2005

PATENT APPLICATION: US/09/474,435A

TIME: 11:32:18

Input Set : E:\pa_00262.rpt

Output Set: N:\CRF4\07292005\I474435A.raw

```

152 gcctgttggt gtgtaagcag ggacggttca atggaaattht acatgcggaa agaattgaga 180
154 tattgaggat taaaccccat tggtaacaagc ttacgttttg ttgtacttac ttatttacag 240
156 ctttcttata acaatcaaaa ctcttggcag ctactgaata tggagcactt cgatgatgtt 300
W--> 158 tggcaagatg gccaatgaag tgtctatgcc ccggatgctc gogttntgac tacatattat 360
160 tgtggtatga ttntcctttt ttctggaatt catgagctaa ttgattctct tcttctctct 420
162 tttacttcat gttttcgtgg ctttatcttc ctggtgaaat gaactcttaa tngctaacct 480
164 gtaacttaca ag 492
167 <210> SEQ ID NO: 4
168 <211> LENGTH: 7290
169 <212> TYPE: DNA
170 <213> ORGANISM: Arabidopsis thaliana landsberg
172 <400> SEQUENCE: 4
174 gaagatgcta atggaccctt aaatcaattc cccatacatc aaagatctcc atttccaaga 60
176 ttgggttctg aggcatttca ttctctctgc taatgtttgc ctttctctgc ctgagcgtct 120
178 ttaaaccattg atggttacca aaaatctact tgcagaatct ttgacactgt cttgaatgtc 180
180 gcgaagtggg caccatatgc agagccgtgg caatgtagca ggataccttc tacttcatct 240
182 tctcagacgc atctcctgta aatcttatct ttacagagag tgtaaaggta aggctcatcc 300
184 cagtagtaat ggtgtatgtc cctgaaaaac ttcttccttt cataactggt caacttggga 360
186 gactctactt cgcagccaa ataattgacg tgatcagcat accatggaga tcttccctca 420
188 atagcactca gttggtggaa ctctttccca ctgtagctcc caccgaagaa ttctacaacc 480
190 atgagttgct cttttggcat tgagtcgtcc atttgaatag gttcttcaat tctcatcctt 540
192 gccagatggt caactgcacc attttcaatg tccttcttgt ctactatata catgtcaaac 600
194 tcgtgcaaca gaagtatgca tctcaacagt cttggtttag tatccttctt ggcatacata 660
196 tgccctcaaag ttgcatggtc tttatagaca gtgaccttgg atccaaccaa atagcttctg 720
198 aacttctcaa atgcgaatac aacagctaga agttccttct cagttgttgc atattaatat 780
200 agctcaaatt gccttaagct tactccctca aataagagat cgtcgttagc actttgataa 840
202 taggttttta gtcaattatc ctaaaacacc aatcatgtca ttgtagtatt ttaggttgtc 900
204 aatccaaatg ggtgtgatgc taacaatcaa gatgtgatca gaagtcacta agtcaagcca 960
206 agcataacag gttttggtgt gttccagcag tcctaagtga acatgcagaa aacagaaaat 1020
208 caaacagaaa cagtaaaaca ctgcaccaac acagctcttt gtagagctct ggggtgaggtc 1080
210 gagtgcagag tcgagtaaca gacaggaaat gaaacaggga tactcgactg cacagtctgt 1140
212 tgccagacaa ctgggtggtc gagtatcagg tcgactaaca gtaaagattt gcagaaacta 1200
214 aacaacagat gacaggatgt agtaaacagt agtagagtaa acaataaaat caattagata 1260
216 agaattcctt aaggatggga taattgagta gtttcgtttc ctgagtttac aggtgattga 1320
218 catgctcaat aaattaaccc tagacaacaa gttcattaac taaatctaag tgccaccgca 1380
220 acagagactc tcaagctaac ctagtccag actcaatcac cattgacgag agctaaccta 1440
222 acaagcatta cgaatcaaca agttaaagcc aaaacgctcc ctgcaaccaa taccttggtat 1500
224 cagggtcaca aatctatgga attagtgggt cagacatttc atcgaatacc ttttgggcgc 1560
226 ggaaatgtct gggctcaaat tccagttgat cagaaagcaa taggcattaa gaacaactaa 1620
228 tccagaaggg atctatcaat caatactcaa tcacctagca tactgagaat tctacactac 1680
230 tctaaccat cctcagggaac ctattcacta ctcatatc ataatagaaa gcataaacgt 1740
232 tgaacagggt gaagacatga taacaacagt gtaacagtag tgtgataaca aaatgaacaa 1800
234 cagtaaacga aaatcaagaa ccaaaaactg atactgaata gataaagaga aatccggatt 1860
236 acaaaaagtc tagaacacaa ggtctgcgga aataaaaact ggtaaaaact tcttttttcg 1920
238 aaaatgagaa gtacatgcta cttatagcca aatatcccga aaccctaata ctcaaacga 1980
240 cgaagtattt ggacgggtta agaactgtac tcgaccagag tggctcgagt agaggtcgag 2040
242 tgaatagctg gagtcttctt ttcttccttg tgctcgagtg tctggttgag tgcagaatga 2100
244 agaaggctct gaagcttgtc atcgagtatg cagtcgagtg gtgtgatgga gatactcgac 2160
246 ctctaggtag agtgagtagg tcgagtgggt gtctgatgat ggaggtgaag aactcgacc 2220

```

RAW SEQUENCE LISTING

DATE: 07/29/2005

PATENT APPLICATION: US/09/474,435A

TIME: 11:32:18

Input Set : E:\pa_00262.rpt

Output Set: N:\CRF4\07292005\I474435A.raw

```

248 tcatggtcga gtgaagtgat cgagtggcgg tctggtgatg gagacgaggg cactcggcct 2280
250 cggggtcgag tgggtgaggtg aagtgggtgat gtcctctact cgacctggcg gtcgagtgat 2340
252 ctcttgagat cttgaagctc ctactcgacc tctgggtcga gtgatttata atgatcaggt 2400
254 ccgcttcttc cagatagctc gtcaacagct ccaaatacacc ttaaatacaac gcaaataatgc 2460
256 aacatgcatg caaaactata ctaaactatgc aaagtgatga caaatgatgt gaaatggat 2520
258 gaaacaatga tgatatgatg ctaaagtgat gacaaatgga tgctcaaaac atgcaaaata 2580
260 cacacttata accaagtgat taccttcttt gcaaactctt cctccactct cttgcgagca 2640
262 gagaaacata atggttgctg caactagaac taggttcaact aaccaattgg actgatacaa 2700
264 agaataccta cttcgatgaa tccgtgacag aggcacttcg tttgcaaatt tcttcattca 2760
266 ctcaagctcc acccgaatcc cttagagcag cttggctcgg tatcagatct tattagcgtg 2820
268 aatgtcccca acatggtttt caagagagcc aactcattaa tatattctac agaggggtag 2880
270 ccaagccata ccggactcaa cttgatgcag cgagctactg taacttcatg acaagaacta 2940
272 ctagtgaagc attactcttc attaccaatg ctttaactag tctttcgaca caggaagttg 3000
274 acacaaaaca aagaatttca gctgagaatg ccaccgcaag caaagagact cttgtttcag 3060
276 taattttctgc tcctatccaa gccccccct ccaccttct tagacagcag acttgattcc 3120
278 atgcttgccc agattttcgc gtgccaaaca aagctcgagg ataagtttga tagcaaatat 3180
280 gattctctct atacagatct aaatagcacg attgacaatc tacgctctca tataacggaa 3240
282 ccctcaccta catcagcttc tatcaatgca gtcacattac gcaatggaaa gcaactgaat 3300
284 ccaatacttc agcgcgaacg ttcagctcag ccttcatctt taccagttgc agaaaaagac 3360
286 tcagttcgat tgacaccaat cactcttgac gactctgttt tgcctttgtc gagtgaatc 3420
288 gacaatttcg tggaggagga ggaaattatt cccgatgggtg tcgatacgaca cccagctcgt 3480
290 tcagacaatg tgcaaatcga agctaaaacc aagtcagcaa atcggcaaat tcctttcccc 3540
292 aagagtccta aaaaaacaag ataagcctta gatgatgtca gatgcaaggc tatgattgat 3600
294 aaggttatta ttgagatggc tctagttgaa gctattcatc tctctccac aataagaagg 3660
296 tatgtcaaga caatggtcac taagaattta acgaaagaat acagtgttat gatgttttca 3720
298 gagcatggaa gcgatatcat ttaggaacga attccaagaa agctacctga ccctggaacc 3780
300 tttgtactaa gtgtcaccat ccaaccacga ttcttccca agagccttat gtgatctcgg 3840
302 ttctagtgtg aatctgatgc ctcggtcagt tgctaccttt atcactcttg tgttggtaga 3900
304 tcgttctacc cggattccag atggaattct tattgatgtt cccgggatga ttggaaagag 3960
306 catgattcct atagacttcg tagtcttgcc ttatgagaag gaacctaaag atccattaat 4020
308 ctttgggaga tccttcttgc acactgctgg agcaatcata gatgttcgac aaggcaggat 4080
310 agggctgaat gttggcaatc ttactatgca gttcaatatg aacacttttg tcaagaaacg 4140
312 gatcatagaa gggaaaacct tcttgataga ttctttcaact tcatcagctt cagatagtat 4200
314 ttcagagatg gaattagaag acccactaga gcgagttttg gtctcttcca tagtgatag 4260
316 tgcagatttg gacagtgaac cttctacata tactaagctg caagatgaga ccgaacatgt 4320
318 gatgcaactt acggttgaag aagctcttcc atctgtgatt ccaacaccga ctattaattc 4380
320 agattgggat ccagcaaagg ctctcaaat cgatttgaaa ccacttccag cagggctaag 4440
322 gtacgctttt cttggtgaaa attctactta tcatgttatt gtgaatgttt ctcttaatcc 4500
324 cgcagagctc accttattgc taagcaagct gcgcaatcat cgcaaagctc ttggctattc 4560
326 tcttgatgac attgcaggta tatctccaga tgtatgcatg cataggattc accttgagga 4620
328 tgagtctaag tcttcgttga acatcagaga aggctgaatc cgaatctgaa agaagtgggt 4680
330 aagaaagaga ttatgaagct gttggaagca gggattatta atccgatttc agatagcagt 4740
332 tgggttagtc cagtttatgt agttcctaag aaaggagctg ttggaagcag ggattatcta 4800
334 ttcgatcttt gttatgctcc ttcaacattt cagagaggta tgatgtctat cttcacagac 4860
336 atgattgagg atatcatgga ggtcttcatg gatgattttt cagtttatgg atcatcgttt 4920
338 gaggattgct tagagaatct ctgcaaagta ttagcaagat gtgaggcaaa acatctggtt 4980
340 ttgaattggg agaaatgtca ctttatgatg taggatgaga tagttctcgg tcatagaatt 5040
342 tttgagcatg gtatagaagt cgatagagct aagatcgaaag ttatgacaag tcttcgagcg 5100
344 ccgataatg ttaaagcaat gaggagtttc cttggacatg ctcgtttcta taggagattc 5160

```


RAW SEQUENCE LISTING

DATE: 07/29/2005

PATENT APPLICATION: US/09/474,435A

TIME: 11:32:18

Input Set : E:\pa_00262.rpt

Output Set: N:\CRF4\07292005\I474435A.raw

```

346 atcaaaggtt ttaggaaaat tgcaagacca ttgaccgctt tactctgtaa agaagttaaa 5220
348 ttcgaatttt acataagagt gtcattgttg gacatgggca ttgccccttc aatgttagga 5280
350 ggcccaaaac agatatcaac aaagaagagg gccttttgcc attaaaaagg ccatttaggt 5340
352 cgagaagggc aaaatcataa tttgcaaggg agacagaacg gaatttaggg ttcagattcc 5400
354 ctataaatag agagaaacac tattgggagc aagatccgat ccacaggtta tttagctgaga 5460
356 gacaaagaga atcgttgcct tgcccgaat cgttgcctag cccgacctcg ttgcctagcc 5520
358 cgacatcggt gcctcgccca tttctgtact ttgtctttct gcttttacga tgaagtcttc 5580
360 ggctcggcag gatagtctat aaccggcgag acaaaactag tttgctgtaa tctctcgatc 5640
362 tttgttatcg ttaataaaat ggaccaactc cgttcagccc ccaaaatctc gtatattatt 5700
364 attattattg catccccaat acaataaatt gacgccact gtggggccgt tgatcgaagc 5760
366 tatccttttt tgacgagcct atgcatcctg accctcaca gattcgcggt gatatgatag 5820
368 atacttccag cgatcgagaa actgatactg gcatacctca agcgcccgac gcgctgggct 5880
370 tacctccgct caaccagca gccatccgtg ccgagcatga tccctcgcg cgaatcttgt 5940
372 tcacaccaga cacaggagga gaaacagatc atgttcaggt cgcacgacct cctgcccgcg 6000
374 ctacccccct cgcagtagct ccagccgacg aagcgaccgc agctgcagca gcagcagcaa 6060
376 aaggcgccgc tcaaagacgt accacaacag cagaacgagg caccatttta gacgacctcg 6120
378 ttcaaaccat tcttgatcga ctcgacggac aggaagcacg aactaccgaa cggattgacg 6180
380 cctttgtggc agcacaagtc acttcccaga gtcagatcga gcggcttcga cgccgaaaac 6240
382 acacctccca acctcatgac aatcacgatg gacagcagtc tccgcgaact ccagtcaccg 6300
384 agcgctcaga gacccatcgc cgtagaccag cgtcagttat cgtaggattc atcgacgagc 6360
386 attctcgcg tagcccacaa gatgaccaca acctacagaa cgaccacaat atgcagagcg 6420
388 gccccaacct gccgagcggg cacaacctgc agaacaaca caaccagcag agcggccaca 6480
390 acgtgaaaaa cggccacaac cagcagaatg gccacaaca gcagagcggc tccaacctgc 6540
392 ggaacgtgca caacatgttg cctaacaaca actatccgca gagtaatcat aatctgaacg 6600
394 accacgatct cgcgagaggt caaaatctgc caagcgacca gtattttccg aataaccaa 6660
396 ctctcgagtg caggcggatc ttttcggatc gacctatcga agttgaaaac cgatcccgcg 6720
398 atctggaact tgcacggttg aacgcggtta caagagatat gtcttccaaa atgaattggg 6780
400 ccaccaccgc ggcccccgaa ctagagaggg tgttggaaga aacacaacgc tcgcccttca 6840
402 cggcgcgctc ctcggcagta cgcgtttgtc atgttaataa agtcaagcta ataccataca 6900
404 acggtcttac cgacccaag atcttcttta aatcaatgtg cattgccatc aatggtgcac 6960
406 attttttctg ctaaagaaag tgatgctaga agttgccaaa tgttcttgga aaacctgact 7020
408 gcagacgcac tcaactggtt ctcgcgaaat ggagccaatt caatcgatag ctaccgaaa 7080
410 cttacatctt tattcctgca gcaccaactc gttttcatga ttaaggaggc cacaacgcc 7140
412 gacttgtgga ccatgtctca gaaggaaagc gaaccactta gaactgtcat tgaaagattc 7200
414 aagaaggttg tctcgaatat agccataact gatgatgcgg ctatcggggc tctacgaaac 7260
416 gcgttaagtt tcggatcacg gtttagagaa 7290

```

419 <210> SEQ ID NO: 5

420 <211> LENGTH: 1864

421 <212> TYPE: DNA

422 <213> ORGANISM: Arabidopsis thaliana landsberg

424 <220> FEATURE:

425 <221> NAME/KEY: unsure

426 <222> LOCATION: (1)..(1864)

427 <223> OTHER INFORMATION: unsure at all n locations

429 <400> SEQUENCE: 5

```

431 ttagagtgga gttttgtgtt aaagatatatt atttacctga cattatgaca atttctaata 60
433 accacataaa tagttacaca aaagaattta gagtgagttt tgtgttaaag atacgacata 120
435 acatttttct aatgacatta cagggaatgg cattactgac actatcagta tcgctaccgg 180
437 gacttaaacc accgaaatgt tcgacggcta atgttgaaaa ctgtgaaaaa gcttcggtta 240

```

RAW SEQUENCE LISTING ERROR SUMMARY
PATENT APPLICATION: US/09/474,435A

DATE: 07/29/2005
TIME: 11:32:19

Input Set : E:\pa_00262.rpt
Output Set: N:\CRF4\07292005\I474435A.raw

Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:1; N Pos. 22,55,61,90,92,552
Seq#:3; N Pos. 346,373,472
Seq#:5; N Pos. 1588,1589,1590,1591,1592,1593,1594,1595,1596,1597,1598,1599
Seq#:5; N Pos. 1600,1601,1602,1603,1604,1605,1606
Seq#:7; N Pos. 5244,5245,5246,5247,5248,5249,5250,5251,5252,5253,5254,5255
Seq#:7; N Pos. 5256,5257,5258,5259,5260,5261,5262,5263,5264,5265,5266,5267
Seq#:7; N Pos. 5268,5269
Seq#:9; N Pos. 4004
Seq#:14; N Pos. 876,877,878,879,880,881,882,883,884,885,886,887,888,889,890
Seq#:14; N Pos. 891,892,893,894
Seq#:16; N Pos. 972
Seq#:25; N Pos. 182,183,184,185,186,187,188,189,190,191,192,193,194,195,196
Seq#:25; N Pos. 197,198,199,200,201,202,203
Seq#:27; N Pos. 897
Seq#:32; N Pos. 451,504
Seq#:46; N Pos. 2549,2550,2551,2552,2553,2554,2555,2556,2557,2558,2559,2560
Seq#:46; N Pos. 2561,2562,2563,2564,2565
Seq#:50; N Pos. 5465
Seq#:55; N Pos. 246,247,248,249,250,251,252,253,254,255,256,257,258,259,260
Seq#:55; N Pos. 261,262,263,264,265,266,267,268,269,270,271,272,273,274,275
Seq#:55; N Pos. 276,277,278,279,280,281,282,283,284,285,286,287,288,289,290
Seq#:55; N Pos. 291,292,293,294,295,296,297,298
Seq#:63; N Pos. 51,52,53,54,55,56,57,58,59,60,61,62,63,64,65,66,67,68,69,70
Seq#:63; N Pos. 408
Seq#:66; N Pos. 1131
Seq#:71; N Pos. 429,478
Seq#:75; N Pos. 1222,1237
Seq#:81; N Pos. 782,783,784,785,786,787,788,789,790,791,792,793,794,795,796
Seq#:81; N Pos. 797,798
Seq#:85; N Pos. 56,57,58,59,60,61,62,63,64,65,66,67,68,69,70,71,72
Seq#:92; N Pos. 4696,4697,4698,4699,4700,4701,4702,4703,4704,4705,4706,4707
Seq#:92; N Pos. 4708,4709,4710,4711,4712,4713
Seq#:93; N Pos. 1416
Seq#:95; N Pos. 2717,2718,2719,2720,2721,2722,2723,2724,2725,2726,2727,2728
Seq#:95; N Pos. 2729,2730,2731,2732,2733,2734,2735,2736,2737,2738,2739,2740
Seq#:95; N Pos. 2741,2742,2743,2744,2745,2746,2747,2748,2749,2750,2751,2777
Seq#:95; N Pos. 2778,2779,2780,2781,2782,2783,2784,2785,2786,2787,2788,2789
Seq#:95; N Pos. 2790,2791,2792,2793,2794,2795,2796,2797,2798,2799
Seq#:101; N Pos. 3415,3416,3417,3418,3419,3420,3421,3422,3423,3424,3425
Seq#:101; N Pos. 3426,3427,3428,3429,3430,3431,3432,3433,3434,3435,3436
Seq#:101; N Pos. 3437,3438,3439,3440,3441,3442,3443,3444,3445,3446,3447
Seq#:102; N Pos. 442,443,444,445,446,447,448,449,450,451,452,453,454,455
Seq#:102; N Pos. 456,457,458,459,460,461,462,463,464,465,466,467,468,469
Seq#:102; N Pos. 594,624,630,632,633,635,641,642

RAW SEQUENCE LISTING ERROR SUMMARY
PATENT APPLICATION: **US/09/474,435A**

DATE: 07/29/2005
TIME: 11:32:19

Input Set : E:\pa_00262.rpt
Output Set: N:\CRF4\07292005\I474435A.raw

Seq#:103; N Pos. 4855
Seq#:106; N Pos. 6626,6627,6628,6629,6630,6631,6632,6633,6634,6635,6636
Seq#:106; N Pos. 6637,6638,6639,6640,6641,6642,6643,6644,6645,6646,6653
Seq#:106; N Pos. 6654,6655,6656,6657,6658,6659,6660,6661,6662,6663,6664
Seq#:106; N Pos. 6665,6666,6667,6668,6669,6670,6671,6672,6673,6674,6675
Seq#:106; N Pos. 6676,6677,6678
Seq#:109; N Pos. 193,194,195,196,197,198,199,200,201,202,203,204,205,206

VERIFICATION SUMMARY

DATE: 07/29/2005

PATENT APPLICATION: US/09/474,435A

TIME: 11:32:19

Input Set : E:\pa_00262.rpt

Output Set: N:\CRF4\07292005\I474435A.raw

L:63 M:289 W: Identifier Missing or Out-Of-Order, <150> PRIOR APP FILING DATE
L:65 M:289 W: Identifier Missing or Out-Of-Order, <150> PRIOR APP FILING DATE
L:83 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1 after pos.:0
M:341 Repeated in SeqNo=1
L:158 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3 after pos.:300
M:341 Repeated in SeqNo=3
L:483 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:5 after pos.:1560
L:802 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:7 after pos.:5220
L:1235 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:9 after pos.:3960
L:1602 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:14 after pos.:840
L:1719 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:16 after pos.:960
L:2384 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:25 after pos.:180
L:2499 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:27 after pos.:840
L:2844 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:32 after pos.:420
M:341 Repeated in SeqNo=32
L:3611 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:46 after pos.:2520
L:3986 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:50 after pos.:5460
L:4267 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:55 after pos.:240
L:5290 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:63 after pos.:0
M:341 Repeated in SeqNo=63
L:5463 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:66 after pos.:1080
L:5708 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:71 after pos.:420
L:6249 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:75 after pos.:1200
L:6940 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:81 after pos.:780
L:7081 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:85 after pos.:0
M:341 Repeated in SeqNo=85
L:7760 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:92 after pos.:4680
L:7851 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:93 after pos.:1380
L:8284 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:95 after pos.:2700
M:341 Repeated in SeqNo=95
L:8985 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:101 after pos.:3360
M:341 Repeated in SeqNo=101
L:9020 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:102 after pos.:420
M:341 Repeated in SeqNo=102
L:9201 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:103 after pos.:4800
L:9622 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:106 after pos.:6600
M:341 Repeated in SeqNo=106
L:9735 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:109 after pos.:180
M:341 Repeated in SeqNo=109
L:10526 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:117 after pos.:10080
L:11587 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:125 after pos.:5220
M:341 Repeated in SeqNo=125
L:11916 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:127 after pos.:3900
M:341 Repeated in SeqNo=127
L:12293 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:128 after pos.:7620
M:341 Repeated in SeqNo=128
L:13406 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:133 after pos.:4620
M:341 Repeated in SeqNo=133

VERIFICATION SUMMARY

DATE: 07/29/2005

PATENT APPLICATION: US/09/474,435A

TIME: 11:32:19

Input Set : E:\pa_00262.rpt

Output Set: N:\CRF4\07292005\I474435A.raw

L:15137 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:155 after pos.:1920

M:341 Repeated in SeqNo=155

L:15238 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:156 after pos.:480

M:341 Repeated in SeqNo=156

STATISTICS SUMMARY

DATE: 07/29/2005

PATENT APPLICATION: US/09/474,435A

TIME: 11:32:20

Input Set : E:\pa_00262.rpt

Output Set: N:\CRF4\07292005\I474435A.raw

Application Serial Number: US/09/474,435A

Alpha or Numeric or Xml: Numeric

Application Class:

Application File Date: 12-28-1999

Art Unit: IFWO

Software Application:

Total Number of Sequences: 195836

Total Nucleotides: 167769494

Total Amino Acids: 0

Number of Errors: 0

Number of Warnings: 112071

Number of Corrections: 0

MESSAGE SUMMARY

289 W: 2 (Identifier Missing or Out-Of-Order)

341 W:112069 ((46) "n" or "Xaa" used)